



Testimony of David Lis, Manager of Appliance Standards Project Northeast Energy Efficiency Partnerships (NEEP)

To the Massachusetts Joint Committee on Telecommunications, Utilities and Energy
Regarding House Bill 3124 and Senate Bill 1524
October 7, 2009

Chairmen Morrissey and Finegold, and members of the Committee: on behalf of Northeast Energy Efficiency Partnerships (NEEP)¹, I thank you for the opportunity to testify in support of HB3124/SB1524, "An act relative to expanding energy efficiency in the Commonwealth". My name is David Lis and I serve as the Appliance Standards Manager at Northeast Energy Efficiency Partnerships based in Lexington, MA.

NEEP is a regional organization founded in 1996 to promote the efficient use of energy in homes, buildings and industry in the Northeast U.S. through regionally coordinated programs and policies that increase the use of energy efficient products, services and practices, and that help achieve a cleaner environment and a more reliable and affordable energy system. NEEP's vision is that the Northeast region will wholly embrace energy efficiency policies and programs as a cornerstone of a sustainable energy policy, a vibrant economy, and a healthy environment for people to live and work in, as well as being a role model for energy efficiency nationally.

What is energy efficiency?

Energy efficiency is the ability to get more work (function) out of a device or appliance using less energy. Many people confuse energy conservation with energy efficiency and incorrectly associate efficiency with sacrifice. For example, consumers may believe shutting off lights or turning down their thermostat means efficiency. **Energy efficiency actually means working smarter.** More efficient consumer products simply use less energy to perform the same tasks as comparable products. Energy efficiency allows Massachusetts residents to save energy and money while going about their business, with no inconveniences or sacrifice of comfort.

Most consumers don't think about purchasing energy. Instead they want the things that energy provides; cold drinks, warm showers, clean dishes and yes, clear, crisp Television displays. Energy efficient products not only provide these services, but do so using less energy, and in the process, save consumers energy, money and the environment (by reducing harmful emissions).

When operating costs (energy expenditures) are considered over the course of an appliances lifetime, they can be on the same scale as the upfront purchasing price. For example, a typical television (TV) can cost between \$500-\$1000, while the cost of operation over a 10 year lifetime can range between \$300-700. When the lifetime savings in energy costs are compared to the incremental increase in upfront costs, purchasing energy efficient products typically provide consumers significant savings. Simple payback for the products included in this bill range from .1 to 4.1 years. For televisions (TVs) in particular, payback is around 2 years.

At this crucial point in our state's history when consumers and governments alike are searching for ways to reduce energy consumption, energy efficiency has distinguished itself as the cheapest, easiest way to achieve these goals.

¹ These comments are offered by NEEP staff and do not necessarily represent the view of the NEEP Board of Directors, sponsors or partners.



Policy rationale for standards

Opponents reason that if the economics are so overwhelming, people will buy efficient products without the state setting standards. In fact, some consumers do purchase the energy efficient products. National market share figures for TVs meeting the Tier 1 standards are already at approximately 85%. Standards target the bottom fraction of markets that continue to stagnate. Unfortunately there are a number of significant market barriers that cause this stagnation and prevent even very cost-effective energy-saving products from achieving higher market shares. In some instances, even aggressive ratepayer-financed incentive programs cannot convince purchasers to choose efficient products.

Let me highlight a number of market barriers that are common reasons efficiency does not happen on its own:

- *Consumer awareness*- Many consumers do not consider operating costs when purchasing appliances. They are not aware that operating costs for some appliances can cost as much over the life of the product as the entire upfront cost.
- *Split incentives/Third party decision makers*- Purchasers and user of appliances can often be different people (landlord/renters). In this scenario the landlord/purchaser has no concern for operating costs. Initial price is their singular concern. Incremental upfront cost for efficiency can often prevent this purchaser from buying efficiency.
- *Stocking practices*- In some cases, retail outlets do not stock or offer high efficiency products at their location, not even providing consumers the choice of an efficient product.

Clearly, a number of market barriers to very cost-effective efficiency improvements exist for both consumer and business products. Efficiency standards are perhaps the most cost-effective way to address these market barriers and to **assure all purchasers of a basic level of energy efficient performance**. A report issued by Appliance Standards Awareness Project in July, 2009 "Ka-BOOM! The Power of Appliance Standards" addresses these market imperfections in more detail and can be downloaded from www.standardsASAP.org.

Standards "Lock in" Market gains, play crucial Role in Market Transformation

You will hear from other groups today that the voluntary market pull programs, ENERGY STAR for instance, are all that is necessary to drive improvements in efficiency. History can attest that this is not the case. While ENERGY STAR programs are terrific, markets truly transform with the complement of both programs and standards.

NEEP sits in a unique position with respect to efficiency, working with both the high level policy actors to ensure efficiency is a top of mind resource for energy management (including standards), as well as the on-the-ground implementers of energy efficiency programs, typically electric and gas utility companies like National Grid and NSTAR (Both of which are in support of this bill). NEEP's Northeast Retail Products Initiative, which is made up of the regions efficiency programs, is actually an 8-time ENERGY STAR Award winner.

We view these two activities as complementary to one another. As the market pull programs encourage consumers to choose more energy efficient products, market share of the high efficiency products grows. As programs reach maturity, markets become so transformed that it becomes time for the "floor" of efficiency to be raised through minimum standards. Promotion of ENERGY STAR Televisions has grown market share to roughly 85%. By now moving the standard to this ENERGY STAR level, we can "lock in" the progress that the programs have achieved. The beauty of this cycle is that the ENERGY STAR level was recently improved and the process can begin anew. Like rungs on a ladder,



programs reach for the next rung, while standards follow by stepping up to that previous rung. This process is often referred to as market transformation and is at the core of our organization's mission.

Successful history of standards and market transformation

To illustrate the power of standards working in concert with market pull programming, I attach the 10 year history of energy efficiency levels for clothes washers in New England. You will see that the high efficiency washer (ENERGY STAR qualified) market in 1998 made up less than 10% of sales. As programs promoted ENERGY STAR and built stronger market shares, Industry formally agreed that ENERGY STAR should be the new baseline and in 2007, it became the new federal standard. **Throughout this period of great efficiency innovation clothes washer sales did not decrease and average prices saw no increase!**

To demonstrate the point that **markets are unlikely to transform without the implementation of minimum efficiency standards**, I refer you to the second graph to answer that question: U.S. Residential Electricity Percentage by End-Use, 2005-2030. A series of products are listed along with their present (2005) and projected (through 2030) percentage of residential electricity use. A descending line indicates a decreasing percentage of energy use; an ascending line, an increasing percentage. Every single one of the descending or flat lines has something in common - a history of state and federal appliance efficiency standards. The products represented by the lines showing residential load growth - for example, TV's and consumer electronics - have no federal efficiency standards though a few have recently enacted state standards. By passing this legislation, Massachusetts can begin to change the slope of these lines.

The time is right for Televisions to join the standards program

State and Federal governments have utilized minimum efficiency standards for over 30 years to achieve significant energy savings for their constituents by addressing the large energy consuming appliances, both residential and commercial. For years TVs used comparatively small amounts of energy compared to their larger appliance relatives. Well, times have changed. Today's high-definition flat screen TVs consume far more electricity than their relatives from a generation ago. Consumers are also buying more TVs, and watching them more often. **Today TVs are one of the largest consumers of energy in the household, at nearly 5% of total electricity usage (projected to climb to 7% or 8% in the next 10 years. Some large screen TVs now consume as much energy as the common refrigerator.** If we want to see TV energy consumption actually improve, provide important benefits to the residents of Massachusetts, the time is now to enact minimum efficiency standards. TVs, and the other products in this package, represent an excellent opportunity for Massachusetts to be a leader in corralling wasteful energy use, and saving consumer's money in the process.

Thank you to the Chairmen and Committee members for your time today. Feel free to contact me with any follow up questions or information requests.

Contact Information:

David Lis, Appliance Standards Project Manager
Northeast Energy Efficiency Partnerships
5 Militia Drive, Lexington, MA, 02421
781-860-9177 x127
djlis@neep.org
www.neep.org